

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

### **Listing of Claims:**

1. (Currently amended) A method for manufacturing a measuring probe ~~(1), in particular a pH measuring probe~~, comprising a housing [(3)] and two electrodes (2, 15), including the method steps:

(a) in order to form a receptacle device [(23)], an electrode wire [(7)] sheathed with extruded plastic is provided, the wire protruding out of the receptacle device [(23)] on both ends, [-] wherein the electrode wire [(7)] is attached to the receptacle device [(23)] at its first end [(7')], [-] wherein in order to form the first electrode [(2)], a glass tube [(8)] is pushed over a second end [(7'')] of the electrode wire [(7)] until the glass tube [(8)] comes in contact with a recess [(26)] in the receptacle device [(23)], [-] and wherein the glass tube [(8)] and receptacle device [(23)] are attached to one another;

(b) in order to form a base plate having a recess [(17)] in the shape of the receptacle device [(23)], another electrode wire [(15)] sheathed with extruded plastic is provided, the wire protruding out of the base plate [(12)] on both ends, [-] wherein the additional electrode wire [(15)] is attached to the base plate [(12)] at its end [(15')] which protrudes out of the base plate [(12)];

(c) a sheathing [(11)] having a first opening in the form of the base plate [(12)] and a second opening [(5)] in the shape of the glass tube [(8)] is provided, [-] wherein in order to form the housing [(3)], the sheathing [(11)] and base plate

[[12]] are sealed together; and

(d) the glass tube [[8]] is pushed through the recess [[17]] in the base plate [[12]] until the glass tube [[8]] protrudes out of an opening [[5]] in the sheathing [[11]] and the receptacle device [[23]] comes in contact with the base plate [[12]].

2. (Currently amended) The method as recited in Claim 1, ~~characterized in that~~ wherein to attach the electrode wire [[7]], it is pushed by its first end [[7']] through a transverse through bore [[45]] provided in the receptacle device [[23]], tightened, and an end [[7']] protruding out of the transverse through bore [[45]] is cut off.
3. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1, ~~characterized in that~~ wherein to attach the electrode wire (7, 15), it is threaded by its first end (7', 15') into a receptacle means (56), e.g., ~~an eye~~ (56) provided in the base plate [[12]] and/or in the receptacle device [[23]], and is tightened and a protruding end is cut off.
4. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1, ~~characterized in that~~ wherein the sheathing [[11]] and base plate [[12]] are sealed by ultrasonic welding.
5. (Currently amended) The method as recited in Claim 4, ~~characterized in that~~ wherein a double weld (57, 58) is produced.

6. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein an electrolyte liquid, ~~in particular a polymer protolyte solution~~, is added to the housing  $[(3)]$  after sealing the base plate  $[(12)]$  and the sheathing  $[(11)]$ .
7. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein to form the first electrode (2, 47) an electrolyte liquid, ~~in particular a polymer protolyte solution~~, is added into the glass tube  $[(32)]$ .
8. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein the receptacle device  $[(23)]$  has a groove  $[(44)]$  running on its outside surface on its end opposite the recess  $[(26)]$ , with the electrode wire  $[(7)]$  being placed in this groove.
9. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein the receptacle device  $[(23)]$  has outside grooves  $[(40)]$  and/or inside grooves into which an elastomer is extruded for manufacturing rubber projections (41, 43) to seal and secure the first electrode  $[(2)]$ .
10. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein the receptacle device  $[(23)]$  has a central recess  $[(26)]$  into which an elastomer is extruded for producing a rubber buffer  $[(42)]$  for buffering and sealing the first electrode  $[(2)]$ .

11. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein a groove  $[(60)]$  formed between the receptacle device  
 $[(23)]$  and the base plate  $[(12)]$  is sealed by an O-ring  $[(61)]$  and a ~~fixation~~ screw  
 $[(62)]$  or a latching means.
12. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein to secure the first electrode  $[(2)]$  and/or the second  
electrode  $[(15)]$  they are glued or welded onto the housing  $[(3)]$  or extruded with the  
housing  $[(3)]$ .
13. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein to form a temperature sensor in the base plate  $[(12)]$  a tube  
 $[(50)]$  is covered with plastic  $[(51)]$ , a heat transfer compound is packed into a tip of  
the tube  $[(50)]$ , and then a twin cable ~~(52), preferably an NTC wire (52)~~, is inserted into  
the interior of the tube  $[(50)]$ , with the two ends of the wire  $[(52)]$  protruding out of  
the tube  $[(50)]$  being soldered to contact rods  $[(55)]$ .
14. (Currently amended) The method as recited in Claim 13, ~~characterized in that~~ wherein a  
recess  $[(54)]$  is provided in the area of the base plate  $[(12)]$  to accommodate a contact  
plate  $[(53)]$  and the contact rods  $[(55)]$  are inserted into the contact plate  $[(53)]$   
arranged in the recess  $[(54)]$ .

15. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein the parts ~~[(7'')]~~ of the electrode wire ~~(7, 15)~~ arranged  
inside the housing ~~[(3)]~~ are at least partially chlorinated.
16. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein the parts ~~(7', 15')~~ of the electrode wire ~~(7, 15)~~ which are  
accessible from outside the housing ~~[(3)]~~ are at least partially gold plated.
17. (Currently amended) The method as recited in ~~one of the preceding claims~~ Claim 1,  
~~characterized in that~~ wherein the base plate ~~[(21)]~~ and/or the sheathing ~~[(11)]~~ and/or  
the receptacle device ~~[(23)]~~ is/are manufactured by inserting into a mold and extruding  
plastic into the mold.

18. (New) A method for manufacturing a measuring probe having first and second electrodes, comprising:

providing a receptacle device, wherein a first electrode wire protrudes out of the receptacle device and a first end of said first electrode wire is attached to the receptacle device;

positioning a tube over a second end of said first electrode wire until the tube comes in contact with a recess in the receptacle device;

providing a base plate having a recess, wherein a second electrode wire protrudes out of the base plate and a first end of said second electrode wire is attached to the base plate;

providing a sheathing having a first opening in the shape of said base plate and a second opening in the shape of said tube;

sealing the sheathing and base plate together to form a housing; and

pushing the tube toward the recess in the base plate, wherein the tube protrudes out of said second opening in the sheathing and the receptacle device is in contact with the base plate.

19. (New) The method of claim 18, wherein the tube is made of glass.

20. (New) The method of claim 18, wherein the first electrode wire and the second electrode wire are sheathed with extruded plastic.

21. (New) The method as recited in Claim 18, wherein to attach said first electrode wire to said receptacle device, said first end of said first electrode wire is pushed through a transverse opening provided in the receptacle device, tightened, and a protruding end is cut off.
22. (New) The method as recited in Claim 18, wherein to attach said first electrode wire to said receptacle device, said first electrode wire is threaded by said first end into a receptacle means provided in at least one of the base plate and receptacle device, tightened, and a protruding end is cut off.
23. (New) The method as recited in Claim 18, wherein an electrolyte liquid is added to the housing after sealing the base plate and the sheathing.
24. (New) The method as recited in Claim 18, wherein the first electrode is formed by adding an electrolyte liquid into the tube.
25. (New) The method as recited in Claim 18, wherein the receptacle device includes a groove disposed on an outside surface of the receptacle device at an end opposite the recess, and wherein said first electrode wire is disposed in said groove.
26. (New) The method as recited in Claim 18, wherein the receptacle device includes grooves into which an elastomer is extruded for manufacturing rubber projections to seal and secure the first electrode.

27. (New) The method as recited in Claim 18, wherein the receptacle device includes a central recess into which an elastomer is extruded for producing a rubber buffer for buffering and sealing the first electrode.
28. (New) The method as recited in Claim 18, wherein a groove is formed between the receptacle device and the base plate and is sealed by at least one of an O-ring, a screw and a latching means.
29. (New) The method as recited in Claim 18, wherein the first electrode and the second electrode are glued or welded onto the housing or extruded with the housing.
30. (New) The method as recited in Claim 18, further comprising a temperature sensor disposed in the base plate, wherein said temperature sensor includes a sensor tube covered with plastic, wherein a heat transfer compound is packed into a tip of the sensor tube and a twin cable is inserted into the interior of the sensor tube, and wherein two ends of a wire protruding out of the sensor tube are attached to contact rods.
31. (New) The method as recited in Claim 18, further comprising a contact plate disposed in said recess in the base plate, and wherein contact rods are inserted into the contact plate.
32. (New) The method as recited in Claim 18, wherein parts of the first and second electrode wires disposed inside the housing are at least partially chlorinated.



33. (New) The method as recited in Claim 18, wherein parts of the first electrode wire which are accessible from outside the housing are at least partially gold plated.
34. (New) The method as recited in Claim 18, wherein at least one of the base plate, the sheathing and the receptacle device is manufactured by inserting into a mold and extruding plastic into the mold.